REMARKS

Claims 22, 25-27 and 29-41 were previously pending in the application. By the Amendment, claims 32, 37, 40 and 41 have been amended, new claim 42 has been added, and claims 22, 25-27, 29-31, 33-36, 38 and 39 remain unchanged. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

Rejections Over Prior Art

The claims stand rejected under the cited prior art of record. Specifically, claims 22, 25, 29, 30 and 37-39 were rejected under 35 U.S.C. §103(a) over German Patent Publication DE 196 22 882 (DE '882) in view of German Patent Publication DE 196 47 567 (DE '567). Claims 26 and 27 were rejected under 35 U.S.C. §103(a) as being unpatentable over DE '882 in view of DE '567 and Bovenkerk (U.S. Patent No. 3,167,159). Claim 31 was rejected under 35 U.S.C. §103(a) as being unpatentable over DE '882 in view of DE '567 and Lampman et al. (U.S. Patent No. 4,746,177). Claims 32-35 were rejected under 35 U.S.C. §103(a) as being unpatentable over DE '882 in view of DE '567 and Japanese Patent Publication 2002-336180 (JP '180). Claim 36 was rejected under 35 U.S.C. §103(a) as being unpatentable over DE '882 in view of DE '567, JP '180 and Milocco (U.S. Patent No. 5,273,061). Claim 40 was rejected under 35 U.S.C. §103(a) as being unpatentable over DE '882 in view of DE '567 and Tilton et al. (U.S. Patent No. 6,539,955), and claim 41 was rejected under 35 U.S.C. §103(a) over DE '882 in view of DE '567 and Williamson (U.S. Patent No. 3,387,382).

Independent Claims

Independent claim 37 recites a dishwasher including a washing container having a plurality of walls forming a volume in which items to be washed are retained, and a heat damping layer that at least partially surrounds the washing

container. The heat damping layer has a variable thermal conductivity in that the heat damping layer can be adjusted between at least a first thermal conductivity value at which thermal conductivity through the heat damping proceeds at a first rate and a second thermal conductivity value at which thermal conductivity through the heat damping proceeds at a second rate different than the first rate.

The heat damping layer contains a closed capsule containing hydrogen in which at least one metal hydride grid is arranged, which can form a chemical compound with the hydrogen and thus bind the hydrogen. The capsule has a selected one of a pressed glass and a non-pressed glass fibre core that is surrounded by a gastight jacket made of a selected one of a stainless steel sheet and a non-stainless steel sheet.

The heat damping layer is configured such that heating of the capsule has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least one of the capsule and the entire heat damping layer is increased. The heat damping layer is further configured such that cooling of the capsule has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule drops, and the thermal conductivity of at least one of the capsule and the entire heat damping layer is decreased. The heat damping layer is in heat-conducting contact with one of walls of the washing container and with an outer wall of the dishwasher. The thermal conductivity value of the heat damping layer is thereby dependent on the pressure in the capsule.

Independent claim 32 recites a method for cleaning and drying items that have been disposed in a dishwasher, such as the dishwasher of claim 37. The heat damping layer can be adjusted between at least a relatively lower thermal conductivity value at which thermal conductivity through the heat damping layer proceeds at a first rate and a relatively higher thermal conductivity value at which thermal conductivity through the heat damping layer proceeds at a second rate

higher than the first rate. The dishwasher also has a heat generating means for generating heat in the washing container. The method includes the steps of the heat damping layer containing the capsule; in coordination with the execution of a first section of a washing program during which thermal energy is built up in the washing container by the heat generating means, disposing the heat damping layer at the relatively lower thermal conductivity value by cooling the capsule such that the thermal energy built up in the washing container is substantially preserved in the washing container; and in coordination with the execution of a second section of the washing program during which a drying process is carried out, disposing the heat damping layer at the relatively higher thermal conductivity value by heating the capsule such that at least some of the thermal energy present in the washing container succeeds to the surroundings via the heat damping layer.

Independent claim 40 recites a dishwasher generally corresponding to independent claim 37 and additionally recites that the dishwasher includes a sound-damping layer surrounding the washing container, where the heat damping layer is disposed between the sound-damping layer and the walls of the washing container. Independent claim 41 also substantially corresponds to independent claim 37 and additionally recites that the walls of the washing container forming the volume in which items to be washed are retained are at least partially configured as condensing surfaces made of a flexible material comprising a metal film having an aluminum component.

Formality

Claim 40 has been amended to correct the formality noted in the Office Action. Withdrawal of the objection is requested.

Arguments

With reference to the Office Action, all of the claims are rejected over DE ‘882 in view of DE ‘567 or also in view of an additional secondary reference. Applicant maintains that these rejections are misplaced for at least the reasons

discussed in previous responses. In addition, the independent claims have been amended to reference the dependency of the thermal conductivity value of the heat damping layer on the pressure in the capsule. The specification describes that upon application of an electric current to the electrical heating means, the capsule is heated, which has the effect that the hydrogen previously bound in the metal hydride grid is released. The hydrogen thus released then diffuses in the entire glass fiber core of the heat damping layer and thereby increases the internal pressure of the capsule. The specification describes the pressure increase from about 0.01 mbar to about 50 mbar, an order of magnitude of 5,000 times. See page 4, lines 18-23. The specification further describes that as a result of the increase in the internal pressure and as a consequence of the release of the hydrogen in the capsule, its k-value also increases, i.e., the thermal conductivity of the capsule or the entire heat damping layer.

Cooling of the capsule has the opposite effect where the free hydrogen forms a chemical compound with the metal hydride grid and is thereby resorbed. The specification describes that "this has the consequence of the pressure in the capsule of the variable heat damping layer drops and as a result the thermal conductivity of the capsule or the entire heat damping layer is reduced." Moreover, the specification describes that as a result of the pressure reduction in the capsule of the variable heat damping layer, its k-value also decreases, i.e., the thermal conductivity of the capsule or the entire heat damping layer. See page 4, line 25 – page 5, line 4. It is thus clear that the thermal conductivity value of the heat damping layer is *dependent* on the pressure in the capsule. Independent claims 32, 37, 40 and 41 have been amended to clarify this dependency.

In contrast with this feature of the invention, DE '567 provides that the heat conductivity of the heat insulation material is not dependent, or only slightly so, upon the gas pressure in the vacuum heat insulation panel. See the English-language Abstract. Moreover, DE '567 describes that the heat insulation material

is micro-porous or nano-porous. In the context of pressure dependency, the present specification distinguishes such material, describing that the heat damping layer of the dishwasher according to the invention contains an evacuable material having a comparatively coarse pore structure which changes its thermal conductivity more strongly than nano-microstructured substances in the event of small vacuum pressure fluctuations. The specification further describes that this property can be used to produce the variable heat damping layer of the invention. See, page 3, lines 28-32.

Applicant thus submits that the DE '882 and DE '567 combination falls short of the invention defined in the independent claims and that the rejections are misplaced.

With regard to the dependent claims, Applicant submits that these claims are allowable at least by virtue of their dependency on an allowable independent claim and also because they recite additional patentable subject matter. The additional secondary references do not overcome the deficiencies noted with regard to DE '882 and DE '567.

In addition, claim 40 recites that the dishwasher includes a sound-damping layer surrounding the washing container, where the heat damping layer is disposed between the sound-damping layer and the walls of the washing container. In this context, the Office Action cites the Tilton patent, contending that Tilton discloses a dishwasher comprising a sound damping layer surrounding the washing container. Applicant submits that those of ordinary skill in the art would not be led to interpose a heat damping layer between a sound-damping layer and the walls of a washing container in view of DE '882, DE '567 or Tilton. Indeed, nothing in the Tilton patent suggests that a sound-damping layer would be positioned anywhere but directly adjacent the walls of the washing container. For this reason also, Applicant submits that the rejection of independent claim 40 is misplaced.

Claim 42 has been added and recites that a pressure difference in the capsule between when the thermal conductivity value of the heat damping layer is increased versus when it is decreased is on an order of 5,000 times. Support for this subject matter can be found in the specification at, for example, page 4, lines 18-23, referencing a pressure increase from about 0.01 mbar to about 50 mbar. With reference to the discussion above, this feature of the invention is also lacking in the references of record.

Conclusion

In view of the above, entry of the present Amendment and allowance of Claims 22, 25-27 and 29-42 are respectfully requested. If the Examiner has any questions regarding this amendment, the Examiner is requested to contact the undersigned. If an extension of time for this paper is required, petition for extension is herewith made.

Respectfully submitted,

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